UNION CARBIDE

NUCLEAR DIVISION NEWS

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 6, No. 17 | NUCLEAR DIVISION NEWS | September 4, 1975

Y-12 robot frees radioactive source at Rochester

MISSION ACCOMPLISHED — Bill Pankratz, left, and Robert Frazier of Y-12 congratulate one another and their mobile manipulator, "Herman," after a successful recovery of a cobalt-60 source at an irradiation facility at the University of Rochester.

A radioactive cobalt source which had been stuck in its housing at the University of Rochester for two and one-half years has been recovered by two Nuclear Division men and a robot manipulator equipped with television cameras.

William Pankratz and Robert Frazier of Y-12 Plant's electrical and electronic maintenance department, operating the Y-12 mobile manipulator, nicknamed "Herman," dislodged the 1,500-curie cobalt-60 capsule from the pneumatic tube in which it had been stuck since early 1973. The recovery operation began August 13 and was completed August 21.

The source was located in a heavily shielded underground chamber at the University's Department of Radiation Biology and Biophysics where it was used for basic, unclassified research. The capsule, about one and one-half inches long and one inch in diameter, had failed to return to its original position in a shielded container after a routine experiment and had resisted all previous attempts by University personnel to dislodge it.

No public hazard

Because of its underground location, there was no hazard to the public, but the irradiation facility could not be used until the source was recovered. Its recovery was complicated by the large amount of gamma radiation emitted, making it impossible for personnel to enter the room where the source was stuck.

Earlier this year, the University learned about the Y-12 mobile manipulator and made arrangements with the Energy Research and Development Administration for its use.

The manipulator system, built to Nuclear Division design specifications by a commercial vendor in 1966, consists of the mobile manipulator, its control console and a workroom-laboratory, all of which are housed and transported in a trailer van. The manipulator is designed so that it can operate at distances up to 700 feet from the control console to which it is attached by a cable. The manipulator is about five feet long, six feet high and about two and one-half feet wide. It has a mechanical hand capable of lifting 160 pounds and has two television cameras mounted behind the arm to transmit pictures to monitors on the control console. The cameras have lenses to permit both distant and close-up views.

New radiation high

Until this assignment, the robot had been used primarily as a safety support backup in operations involving the handling of toxic or radioactive materials in Y-12, but had never been subjected to the amount of radiation imposed by the cobalt source at Rochester. For this reason, specially shielded television cameras designed for use in radiation areas were borrowed from the Argonne National Laboratory.

Pankratz and Frazier began the project by locating the trailer van with control console as close as possible to the irradiation facility. Access to the facility was by an elevator. Frazier led the robot into a nearby building, took it down the elevator and moved it to within approximately 30 feet of the source room. From that point on, Pankratz, operating the manipulator from the control console above ground, used the television monitors for "eyes" as he directed the robot through the tight turns of a radiation shield maze.

To alleviate the problem of handling long cables, shorter cables were lowered through the ceiling of the facility from the trailer van.

Time-consuming

The initial plan was to locate the tube containing the stuck source, shake it with the robot's hand and hope that it would drop back down the tube into its shielded container. As a last resort, the robot would be called upon to cut the pipe holding the source and place it into another container. Before the tube could be reached, however, it was necessary to use a power saw to remove two other pneumatic tubes which were in the way. With Pankratz operating the manipulator controls, Herman cut and removed the two tubes. The operation was a time-consuming one, because each time a blade broke it required about half an hour to manipulate the robot out of the 15 square foot chamber, through the maze and back to where support personnel from the University of Rochester were waiting to change the blade.

Once the tubes were out of the way, the tube holding the source was shaken with a small power hammer in an effort to dislodge the cobalt. When it remained stuck, a special radiation monitor with a thinly-collimated detector unit was used to locate the precise position of the source within the tube. It was discovered that the source was located over a small release latch which had failed to disengage.

Using a tiny Phillip's head screwdriver, Pankratz, working through Herman, opened the small access plate to the latching mechanism. The robot's hand grasped the latch and caused it to move. The source then dropped down the tube into its storage container and the radiation level in the room returned to its normal level for the first time in two and one-half years.

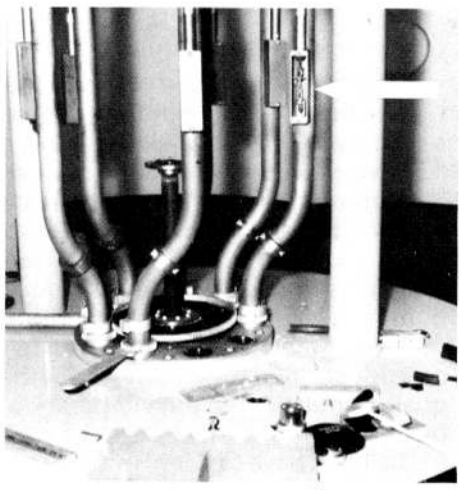
(Continued on page 8)

Bloodmobile visit set in Oak Ridge next week

The American Red Cross bloodmobile returns to Oak Ridge September 10, 11 for its third visit this year. A total of 408 units of blood is the goal for the two-day drive. The hours on September 10 are from 3 to 9 p.m. and on the 11th are from noon to 6 p.m. The place is again at the Oak Ridge Armory on the Turnpike.

Drives in Oak Ridge and Clinton mean total coverage for blood needs for everyone in Anderson County. Other Union Carbide employees may donate, insuring blood coverage for members of the family, regardless of where it is needed, or where the employee lives.

The Red Cross collects more than half of the nation's blood needed in hospitals and research clinics throughout the country.



TROUBLE SPOT — The arrow indicates the latching mechanism which had become stuck, resulting in the cobalt source becoming lodged in the pneumatic tube. Below the tubes is the shielded storage container for irradiation sources.

Pocket-size facts on Union Carbide

An employee should be the best source of information about that company.

Do you know how many employees Union Carbide has? Or what the net income for 1974 was? Or what sales were Division by Division? These, and a lot of other facts and figures are available in a pocket-size folder, entitled "Facts about Union Carbide."

These folders are available from the Public Relations Office, telephone 3-5345.

IN THIS ISSUE

Paducah employees witness wild game near plant area

By Robert L. Wesley

Five female white-tail deer were grazing in a clearing near the road just a few yards away from the main parking lot at the Paducah Gaseous Diffusion Plant.

It was a surprising sight, since I had seen only one deer in the Oak Ridge area in 14 years. There are deer on the Oak Ridge reservation, but most employees seldom see them. Not so at Paducah, according to Keith Bryant of the Plant's employee relations department. Such sightings are quite commonplace to PGDP employees.

Park-like Aura

"Most of us see deer every week," he said. "In fact, our safety programs remind our people to watch for deer on the highway. The bucks, especially, can get pretty wild and careless during the mating season and dart across the road in front of cars."

Aside from this occasional problem, Paducahans seem to be quite fond of their deer and the fact that the very presence of the animals lends a park-like atmosphere to the general setting of the Plant. Most Oak Ridgers are not aware that the Paducah Plant actually is surrounded by a game preserve tended by the Kentucky Department of Fish and Wildlife Resources. It's an area of nearly 6,500 acres, which includes all the land not fenced in by PGDP (750 acres) and the neighboring Shawnee Electric Plant owned and operated by the Tennessee Valley Authority.

Before World War Two, this tract was a collection of small farms and pasture lands held by private owners. In the early 1940's, the government purchased the land from the owners, moved them from the site and established the Kentucky Ordnance Works, a plant to produce black powder and TNT for explosives.

Area Between Plants

After the war, the PGDP and Shawnee plants were built only a few miles apart on the tract. At present, the U. S. Energy Research and Development Administration has over 2,100 acres, the TVA owns over 1,650 and the State of Kentucky owns 2,781 acres there. The state, however, acts as caretaker for the land not fenced in by the two plants.

Responsible for game management in the area is J. D. Boss, the Western Kentucky area manager for the Department of Fish and Wildlife Resources. Boss, a Chattanooga native, came to the job in 1958 and set up the wildlife management program for the land.

"This area gets a lot of public use," Boss said. "We estimate that it receives some 37,000 man-days of use per year by fishermen, hunters, dog trainers, bird watchers, berry pickers and people who just like to look at the selection of wildflowers. Several sportsmen's clubs have meeting places here. It's pretty obvious that the animals are thriving and reproducing and we help them along by planting some 50 quarter-acre plots of millet, beans, corn and sorghum for forage.

400-500 Deer

"We have an estimated 400 to 500 deer on the reservation at any given time. I'm especially proud of that fact, because there were almost none here when the game management program got under way. Through the years, more were attracted to the area, they multiplied and now we have a good deer population. This number allows us to have a few days of registered hunts each year on the reservation. Last year, 126 deer were taken on those hunts which allow only shotgun or bow and arrow. No rifles are permitted and the hunting is not permitted close to the two plants."

Besides deer, the area has rabbit, skunk, squirrel, fox (red and gray), raccoon, muskrat, oppossum, beaver, bobcat, mink, weasel and — get ready for this — coyote. The sudden appearance of several coyote in the territory was a shock to everyone, but there isn't any doubt of their identity, according to Boss. One was killed accidentally by a vehicle and was positively identified. Another was purposely killed to test for rabies. How the coyote got to the area and where they came from probably will remain a mystery, but it might make an interesting plot for Disney Productions or Marlin Perkins to consider.

The area has not attracted any bear or wild boar, such as those found in the wilder regions of East Tennessee. There aren't any rattlesnakes either, although there are copperheads and water moccasins to keep in mind when hiking through the brush.

Testing Ground

The land has been a big favorite for dog owners to train and test their animals. The National Field Trials have been held at the area, with some of the nation's most talented dogs competing for honors. As many as 50 quail coveys have been flushed during one day in field trial competition. Beagles and coon hounds also have their competitions.

Bird watchers can find dove, Canadian geese, wood duck, egret, heron, woodcock, hawk, owl and a large variety of song birds and rough birds. Boss said no attempts are made to stock birds or animals there.

"We tried importing a few pheasants one year," he said, "but it didn't work out. They kept tearing up the quail nests and just wouldn't reproduce. But they didn't hurt the quail population. We have plenty of quail."

The birds have to keep on their toes during the berry picking season to keep up with the people who flock into the area. Since registration is not necessary for picking berries, the area gets a lot of visitors who go after the wild fruit.

Fishing Allowed

For fishermen, the area has seven man-made ponds up to three acres in size which have been stocked with bass, bluegill and catfish. Motors on boats are not permitted.

With all those attractions just a few yards outside the gates of the Paducah Plant, it's easy to see why a few employees may decide to stop off in the management area on their way home from work to take advantage of the recreational opportunities there — a tribute to the excellent work of Boss and his staff.

Y-12 Keeps Code

Y-12 is the only Oak Ridge installation to retain its old military code name, since its variety of activities precludes a simple, meaningful title.

RABBIT STUDY — A cottontail rabbit is tagged for release during rabbit population studies on the West Kentucky Wildlife Area.

WHITE-TAILED DEER — This female is one of some 500 white-tailed deer which live in the West Kentucky Wildlife Area outside the fences of the Paducah Gaseous Diffusion Plant.

RETIREMENTS

D. E. Dryden

O. M. Kelly

B. M. Cameron

Three veterans from the Y-12 Plant retired last week. David E. Dryden, electrical and electronics department, ended more than 24 years company service. He lives at 112 Nasson Lane, Oak Ridge.

Oscar M. Kelly, general shops, came to Y-12 23 years ago. He lives at 108 Paine Lane, Oak Ridge.

Beatrice M. Cameron, who recently completely 30 years with UCC, lives in Oak Ridge.

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NUCLEAR DIVISION

James A. Young, Editor
Accredited Business Communicator
Ext. 3-7100
Ruby Miller, Assoc. Editor
Ext. 3-6421
Keith Bryant, Paducah
Bell 369
Doug Carter, ORGDP
Ext. 3-3434

—Member—
INTERNATIONAL ASSOCIATION OF BUSINESS COMMUNICATORS

Office
Post Office Box Y
Oak Ridge, Tenn. 37830

QUESTION BOX

If you have questions on company policy, write the Editor, Nuclear Division News *(or telephone your question in, either to the Editor, or to your plant contact). Space limitations may require some editing, but pertinent subject matter will not be omitted. Your name will not be used, and you will be given a personal answer if you so desire.*

QUESTION: At the Paducah Plant the hourly employee's layoff allowance applicable to retirement termination was frozen as of December 31, 1966.

If death occurs to the employee before retirement what becomes of the accrued benefit? Is it paid to the beneficiary?

ANSWER: The retirement termination allowance is just that. It is payable only at retirement. If death occurs prior to retirement other benefits are provided: nearly always life insurance; and if an employee is over 55 years of age, and is otherwise eligible, surviving spouse benefits.

QUESTION: I would like to vigorously protest the practice by some petty supervisors of displaying badge pictures of all their employees — all in a row, framed and hung on their office wall for all to see. My badge picture was taken as an act of official business and not to be used in this degrading manner! Can anything be done to remove these from display?

ANSWER: Some managers do display the badge photos of their employees. There is no policy either encouraging or discouraging this practice. We cannot agree that such a photo display of a group of employees is in any way degrading.

For example, a manager of a large and growing division at ORGDP considers his employee photo display valuable to new employees and internal and external visitors in associating a person's name and face. Also, some managers in UCC-ND proudly display the badge pictures of key emplosees in their groups.

QUESTION: What is the average number of years the employees live after retiring from Union Carbide's Nuclear Division at age 65? If possible, I would also like to know the breakdown of this information for white men, white women, nonwhite men and nonwhite women.

ANSWER: We do not have specific information for Nuclear Division retirees. We would expect that it would be longer than for the general population due to their living standards and better medical care. Actuarial tables in the 1975 World Almanac show that a 65 year old white man's normal life expectancy is 13.2 years; a 65 year old white woman's normal life expectancy is 17.2 years; a 65 year old nonwhite man's (listed as "all others" in the Almanac) life expectancy is 13.0 years; and a 65 year old nonwhite woman's life expectancy is 16.1 years.

QUESTION: I have 25 years of company service. For the past 20 years I have worked in my clerical position and have not yet got to the top of the salary bracket. Is it Conpany policy to keep weekly employees from the top of their salary bracket? Is it possible for a weekly employee to transfer to another plant where several openings in this same category of work exist? I like my work but would so like to finish my employment at the top of my salary code.

Is it the supervisor's responsibility to tell me what I must do to reach the top of my salary bracket?

ANSWER: The salary structure is designed so that the midpoint in the salary range represents the job worth. The area below the midpoint is a growth zone, and the area above is the reward zone. A fully competent employee who is performing his work at the level expected of him should be paid in the middle zone of the salary range, while the employee who continues to contribute more than is required for a satisfactory job merits compensation in the reward zone. Being paid at the top of the salary range is not a function of time, but rather based on the level of contribution to the job. Only a few employees perform their work at a level which would justify their being paid at the top of the salary bracket.

Weekly salaried employees may be transferred to another plant if there are no qualified bidders for the position at that plant.

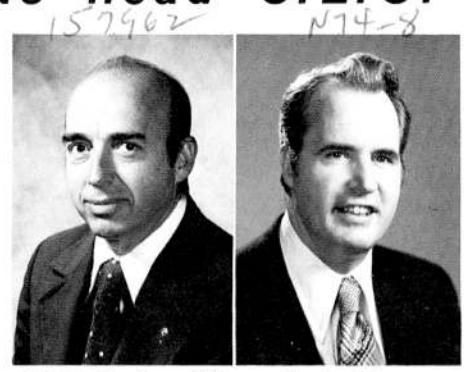
Yes, it is the supervisor's responsibility to tell each of his employees how well they are performing and the areas in which they need to improve their level of performance.

QUESTION: Some weeks ago I received a piece of mail entitled "Some basic facts of BUSINESS ECONOMICS"; this was a Union Carbide Backgrounder. My question is this: Was any expense connected with the production or distribution of this pamphlet absorbed by ERDA? As expenses, I include the cost of mailing this pamphlet to ORNL employees, the cost of whatever time our Laboratory Director spent in composing his cover letter, and paper and reproduction costs for that cover letter.

ANSWER: The BACKGROUNDERs are prepared by Union Carbide Corporation for distribution to all UCC employees. This particular BACKGROUNDER you refer to describes the system which provides the tax monies that are used to meet payrolls and other expenses here in our Division. It is a part of our Corporate communications program which calls for UCC preparing and

(Continued on page 8)

Kuykendall accepts assignment in Brazil; Woy to head C.E.O.



W.C. Kuykendall **E. A. Woy**

D. B. Roe

W. Charles Kuykendall, recruiting manager for the Nuclear Division, has been granted a year's leave of absence to work with the International Atomic Energy Agency. As an expert on nuclear staff management, he will report to the director of technology for the Brazilian government. His responsibilities will be concerned with the man-power program involving Brazil's nuclear technology and power development. The post is a part of the United Nation's development program, and Kuykendall will live in Rio de Janiero.

A native of Wickes, Ark., Kuykendall joined Union Carbide in 1953 on the Oak Ridge Gaseous Diffusion Plant's technical staff, after serving two years in the Army's Chemical Corps. He holds a B.S. degree from Henderson State College, and an M.S. from The University of Tennessee. In 1960, he transferred to the Y-12 plant, where he worked in the Technical and Fabrication Divisions. He has been on UCC's technical recruiting efforts for several years, and was appointed to manage the Central Employment Office in 1967.

He is married to the former Sandra Walker, and they have four children.

During Kuykendall's absence, Edgar A. Woy will serve as recruiting manager. He holds a B.S. degree in chemistry from the Virginia Military Institute. A native of Chattanooga, he served in the U.S. Air Force and was associated with the Deering Milligan Textiles before joining Union Carbide in 1956. He was assigned to the works laboratory, engineering development, experimental barrier development and centrifuge development programs at the Oak Ridge Gaseous Diffusion Plant. He has been involved in technical recruiting since 1965, and was named manager last year.

Woy lives at 136 Normandy Rd., Oak Ridge, with his wife, the former Norma Johnson. They have two daughters.

Donald B. Roe is named manager of technical recruiting. He joined Union Carbide in 1973 in the law department, and was later assigned to the Accounting Division and the Auditing Division. Prior to his employment with UCC, he was assistant city attorney in Oak Ridge, was in private law practice, and was counsel to the U.S. House of Representatives Select Committee on Small Business in Washington. He received his B.A. degree from Oakland University and his law degree from UT. He was recently awarded his M.B.A. at UT.

Roe and his wife, the former Jo Hawkins, live at 1057 West Outer Drive, Oak Ridge, with their two daughters.

ORNL Saturday tour guide drowns in Aug. 10 mishap

James N. White, who had served as a guide for the Oak Ridge National Laboratory Saturday student tours for nearly six years, drowned August 10 when a canoe in which he was riding overturned on Watts Bar Lake.

Mr. White

Mr. White was a biology teacher at Robertsville Junior High School, and a member of First United Methodist Church.

He is survived by his wife, Mrs. Barbara Walker White; two daughters, Melinda and Jennifer, all of 28 Lindale La., Oak Ridge; and his parents. Funeral services were held August 12 at Weatherford's Chapel in Oak Ridge with the Rev. Ben St. Clair officiating. Burial was in Oak Ridge Memorial Park.

COMPANY Service 20 25 30

ORGDP
30 Years

Harold A. Kermicle, instrumentation and quality assurance; Karlthalee P. Turman, adminstrative services; James C. Farmer, guard department; Oscar Wright, janitors department; Wester D. Chapman, U-235 separation department; Aubrey Langdon, isotope analysis department; Orland C. Smitherman, metallurgy department; James W. Fox, fire department; Carl L. Hatmaker, chemical operations administration; John T. Dickenson, maintenance heavy equipment department; John J. Hotz, utilities operations administration; Max Wyatt, SS material handling; and Henry L. Floyd, U-235 separation department.

20 YEARS

Elwood H. Gift and Donald W. McGee.

Y-12 PLANT
30 YEARS

George W. Graham, process maintenance (July 7); Tilden H. Tabor, mechanical inspection; Evelyn T. Wilson, medical department; and Ira J. Shotts, offices services.

20 YEARS

James P. Miller, Johnie R. Parker and H. Chet Borge.

11 Nuclear Division secretaries earn CPS rating

NEW CPS'S IN DIVISION — Newly Certified Professional Secretaries are seen at their desks shortly after notification that they had passed the rigid examinations offered by the National Secretaries Association. The 11 new CPS's include: A. Mary G. Culbertson; B. Dot W. Gaddis; C. Phyllis H. Green; D. Leila A. Heidel; E. Marie W. Hensley; F. Alice P. Maxwell; G. Carolyn J. Miller; H. Wilma S. Nichols; I. Emily M. Ruckart; J. Janet L. Stallworth; and K. Rose M. Wood. The addition of these 11 secretaries brings a total of 62 in the Nuclear Division.

With the addition of 11 Nuclear Division secretaries to the Certified Professional Secretaries roster, we boast 62 CPS's....more than any other company in the world!

A total of 13 area secretaries were recently notified of their certification...11 of them in this division, one with ERDA, and the other with Tennessee Forging Steel (Mabel Thornton, who once worked in Y-12).

New CPS's in the Division include:

Mary G. Culbertson, Separation Systems at the Oak Ridge Gaseous Diffusion Plant, joined Union Carbide after attending Draughon's Business College and The University of Tennessee. She has also attended classes at Roane State Community College. She and her husband, Hoke, live on a farm near Kingston.

Dot W. Gaddis, Health Physics at Oak Ridge National Laboratory, has been there since 1959. A native of New Orleans, she graduated from Draughon's Business College and also attended UT. She and her husband, H. Ray, live at 7613 Luscombe Drive, Knoxville.

Phyllis H. Green, Solid State Division at ORNL, is an honor graduate from UT. She was born in Copperhill, and joined Union Carbide in 1968. She and her husband, Charles, an electrician at Y-12, live at 125 Aspen Lane, Oak Ridge. They have two children.

Leila A. Heidel, Central Management Offices at ORNL, has been at Carbide five years. A native of Petros, she and her husband, Bobby R. Jr., live at 178 Johnson Road, Oak Ridge.

Marie W. Hensley, Engineering Division in Y-12, recently completed 20 years' company service. A native of New Haven, Conn., she has attended evening classes in Clinton and Oak Ridge. She and her husband, Walter (Russ), live at Route 4, Kingston, in the Crestwood Subdivision. Their married son and daughter live in Georgia.

Alice P. Maxwell, Employee Relations at ORNL, has been with Union Carbide 24 years. A native of Dalton, Ga., she is attending UT. She lives at 137 North Beverly Circle, Oak Ridge. Her son, Tom, is employed in the photographic department at ORNL, and another son, Kendall, lives in Florida.

Carolyn J. Miller, ORNL's Health Physics, has been employed at UCC for 10 years. A native of Johnson City, she attended East Tennessee State University there, and is now attending UT. She lives at 129 Goucher Circle, Oak Ridge.

Wilma S. Nichols, Health Physics Division at ORNL, joined Union Carbide in 1973. She was employed by UT and the Atomic Energy

(Continued on page 5)

Earn CPS rating

(Continued from page 4)

Commission prior to joining the staff at the Lab. She is attending UT in the school of business administration. She and her husband, Philip, live at 6920 Westland Drive, Knoxville. They have three sons.

Emily M. Ruckart, ORNL's Thermonuclear Division, is a native of Cookeville. She was employed four years at ORGDP, and has worked at ORNL for the past 10. She has a B.S. from Middle Tennessee State University. She and her two children live at 106 Loyola Lane, Oak Ridge.

Janet L. Stallworth, Biology Division, is a native of Birmingham, Ala. She has been with UCC 10 years, and worked with Internal Revenue Service, the Veteran's Administration and the Department of Army. She has two children, and lives at 217 South Purdue Avenue, Oak Ridge.

Rose M. Wood, ORNL's Thermonuclear Division, is a native of Anderson County. She is a graduate of Knoxville Business College, and joined Union Carbide 10 years ago. She and her son Vincent, live in the Coalfield Community.

PATENTS Granted

To Ed D. Hudson and Merrit L. Mallory, both of ORNL, for "All-Magnetic Extraction for Cyclotron Beam Reacceleration."

To William G. Cobb, ORNL, for "Self-Adjusting Load Balancing Pneutmatic Hoist."

Calendar of EVENTS

TECHNICAL

September 9

ORAU Medical and Health Sciences Division Seminar: "ORAU Marmoset Program," Dr. Nazareth Gengozian. Main Conference Room, Vance Road Building, ORAU, 12 noon.

American Society of Nondestructive Testing meeting: "Product Liability: An Interaction of Law, Engineering and NDT," Roger C. Waugh, consultant with Lockheed. Alexander Motor Inn. Social hour 6:30 p.m. Dinner 7, Program 8.

September 9, 10, 11

AIChE symposium: "Coal Utilization," chaired by John M. Holmes, ORNL. 7;30 - 10:30 a.m. Oak Ridge Civic Center social room.

September 16

ORAU Medical and Health Sciences Division Seminar: "Pu Distribution and Excretion Studies in Nonhuman Primates," Dr. Patricia Durbin, Lawrence Berkeley Laboratory. Main Conference Room, Vance Road Building, ORAU, 12 noon.

PGDP-ORGDP Functions

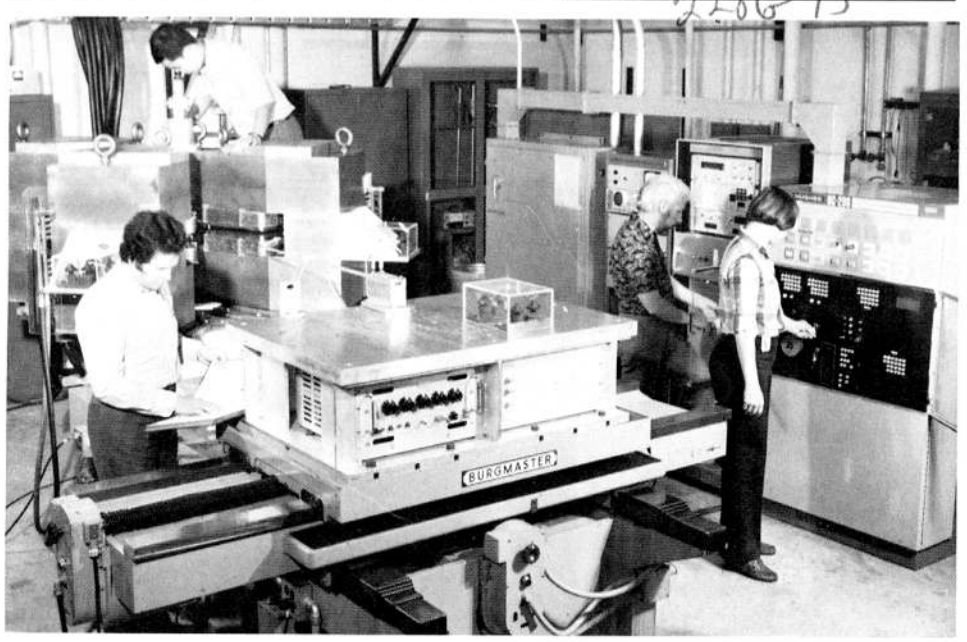
The Paducah Gaseous Diffusion Plant differs from its Oak Ridge counterpart in that it serves as a base plant for the initial enrichment of the uranium, and the Paducah product is used as feed in the Oak Ridge plant.

NUCLEAR DIVISION SAFETY SCOREBOARD

Time worked without a lost-time accident through August 27:

Paducah	44 Days	367,000 Man-Hours
ORGDP	114 Days	2,682,684 Man-Hours
Laboratory	142 Days	2,679,990 Man-Hours
Y-12 Plant	69 Days	2,075,000 Man-Hours

2286-75



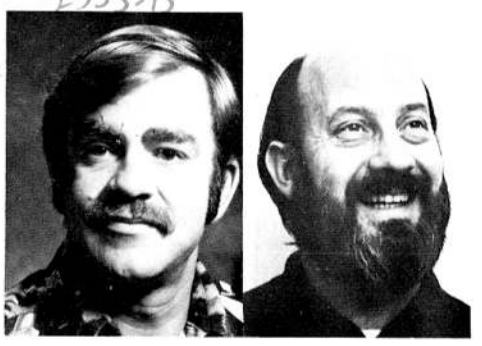
HEAVY ION COLLABORATORS — A group of scientists from the French GANIL project (Grand Accelerateur National a Ions Lourds: "Grand National Accelerator for Heavy Ions") participated with personnel in Oak Ridge National Laboratory's Physics Division during May, June and July in a program of precision magnetic-field measurements related to the design of a large heavy ion cyclotron. Working with the 0.15-scale model of a 2400-ton cyclotron magnet are, from left, Maurice Ohayon, Thanh-Tam Luong, Michele Barre and Marie-Paul Bourgarel. The GANIL project, which will be France's national heavy-ion research facility, will feature a multi-stage accelerator system using two cyclotrons, similar to the design which has been proposed as the second phase of ORNL's Heavy Ion Laboratory project. Physics Division staff who participated in the GANIL-ORNL project included Lee L. Riedinger, Fernde Irwin, Ed D. Hudson, Richard S. Lord and Sigmund W. Mosko.

Five Nuclear Division men honored by organizations

2517-71

C. A. Burchsted H. G. Duggan

2335-75



C. E. Bemis E. Eichler

4-13-74

B. E. Foster

Five Nuclear Division staff members have been elevated to the grade of "Fellow" in professional organizations. Clifford A. Burchsted and Herbert G. Duggan, UCC-ND Engineering, are fellows of the American Society of Mechanical Engineers; Curtis E. Bemis and Eugene Eichler, Oak Ridge National Laboratory, are fellows of the American Physical Society; and Billy E. Foster, ORNL, is a fellow of the American Society for Nondestructive Testing.

The fellow grade is the highest level of membership in most professional organizations. To attain this distinction, a member must have completed a number of years of practice, been responsible for significant achievements in his/her field, and been nominated by several other members or fellows of the organization.

Burchsted

Burchsted, an engineering specialist at ORNL, joined the Nuclear Division in 1952. He holds B.S. and M.S. degrees from Northeastern University and The University of Tennessee, respectively, and is a registered profesional engineer. He received the Seligman Award of the Institute of Environmental Sciences in 1974, and is an honorary fellow of the Royal Society for Health.

Burchsted was cited by the ASME as "a pioneer and recognized authority in the field of nuclear air cleaning and design of hazardous ventilation systems." He is secretary or chairman of several national standards committees and task groups involved in the preparation of standards covering these and related subjects. Burchsted serves as a guest lecturer at air cleaning workshops of the Harvard University School of Public Health, and the University of North Carolina industrial ventilation conferences.

Duggan

Herbert Duggan was recognized by the ASME as an expert in the planning and design of radioactive laboratories and the remotely operated equipment used in them. Since joining the staff at ORNL in 1946, he has participated in the planning and design of all "hot" laboratories in Oak Ridge, and has served as consultant to the Atomic Energy Commission for the design of similar facilities at other locations.

Duggan is superintendent of Mechanical Design at the Y-12 Plant. He received his B.S. degree in mechanical engineering and has done graduate study at The University of Tennessee. A charter member of the American Nuclear Society, Duggan is technical advisor to the National Information Center on Nuclear Standards in the field of remote systems technology.

Bemis

Curtis E. Bemis received his B.S. degree in chemistry from the University of New Hampshire and his Ph.D. in nuclear chemistry from Massachusetts Institute of Technology. He came to ORNL on a post-doctoral assignment in 1965, and joined the regular staff of the Chemistry Division in 1967. He has coauthored about 80 scientific papers on the production and study of heavy elements, heavy-ion science and related areas of interest.

In addition to being a fellow of the American Physical Society, Bemis is a member of Sigma Xi, the American Association for the Advancement of Science and the ORNL Professional Staff Association.

Eichler

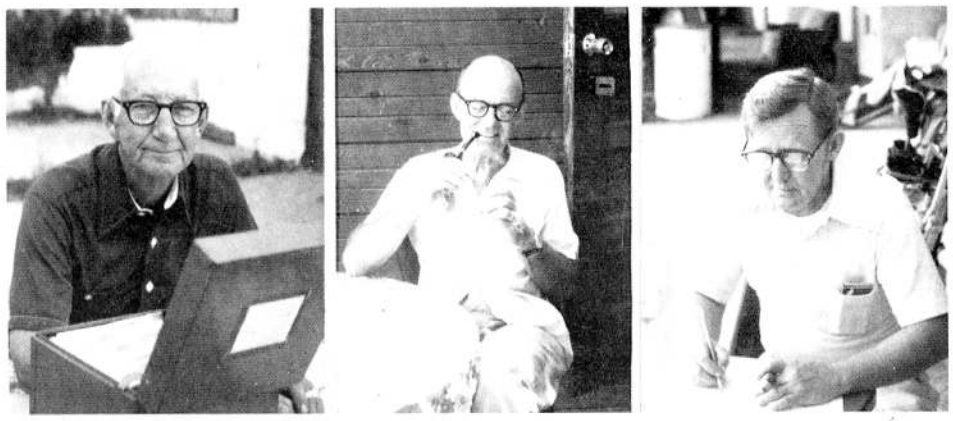
Eugene Eichler, Chemistry Division at ORNL, received his bachelor's degree in chemistry from St. Louis University and his Ph.D. in nuclear chemistry from Washington University. He joined the staff in 1954, and served as a radiochemist with the U.S. Army Chemical Center from 1955 to 1957.

Eichler was a visiting scientist at the Israel Atomic Energy Commission in 1962 and the Neils Bohr Institute in 1968. He is a member of the American Chemical Society and Sigma Xi.

Foster

Billy E. Foster, a penetrating radiation specialist in ORNL's Metals and Ceramics Division, is a fellow of the American Society for Nondestructive Testing. He received his B.S. and M.S. degrees in physics from Millsaps College and Vanderbilt University, respectively, and joined the Nuclear Division staff in 1959.

Foster was recipient of the ASNT's Coolidge Award for advancement of industrial use of x-rays in 1963. He has authored more than 30 publications on utilization of penetrating radiation (x-rays, gamma rays and neutrons) for nondestructive evaluation of materials, and holds three U.S. patents.



TOURNAMENT ENGINEERS — The 15 golf tournaments in the Oak Ridge area were made possible through the efforts of the above men: from left, Hardin Bryan, ORGDP retiree; Roy Clark, ORNL; and Joe Pryor, Y-12. Their efforts through each of the matches kept things moving along smoothly.

Y-12 GOLF TOURNAMENT

Bob Carmack's hot irons put a record low of 68 for Y-12 golfers as they wound down action recently at the Wallace Hills coucse. Bill Butturini and John Baker came in second with 73 apiece.

Handicap honors went to Ted Littleton, with 73; Bill Sise, with 75.

Joe Pryson counted 16 pars ... Danny Rowan, D. Branson and Jim George, all scored 12.

The second flight was taken by Gene Huskisson, 80; and J. D. Francis, 81.

Handicap lows went to Ed Ball, 82; and Richard Neal, 84.

Doug Roberts counted nine pars, R. J. Graham and Al Sawyer, eight apiece.

Paul Shell took honors in the third flight, sharing the limelight with Ken Campbell and Gordon Hill ... all scoring 88 each. Conrad Strike scored o0 to take handicap lows ... Jim Griffin and Avery Kendig, 91 each.

J. J. Sewell counted six pars ... Jack Marquiss five.

SOFTBALL TOURNAMENTS

In Tournament A of the Nuclear League the winners were the Rats ... in Tournament B it was the Outlaws.

The Atomic League was sewed up by the Computes.

Sportsmanship awards went to the ESD team in the Atomic League; to the Odds and Ends in the Nuclear League.

ORGDP GOLF TOURNAMENT

Alvin Boatwright returned to winning form to take the final ORGDP Golf Tournament of the year, staged at Whittle Springs. His one-under-par 71 cinched the title. J. F. Mooney parred the course to come in second. In handicap scoring it was Bill Kimmerly, with 75; and Bob Eby, with 77.

George Williams counted 13 pars, George Wylie and R. K. Johnson, 11 each.

In the second flight J. D. Kirkpatrick came in with an 80 card; Bob Human counted 81 strokes. In handicap firing it was J. B. Wilhoit, 83, John Boggs with the same score.

Seven pars were tolled by H. H. King and J. E. Shoemaker ... Charles E. Searcy and T. W. Bartlett, six each.

The third flight was taken by C. W. Lay, with 82; and T. Krakoviak, with 87. A. F. Payne scored 86 for handicap honors; Ray Rinehart, 95.

Burl White took in eight pars, Dwight Bailey, six.

ORNL GOLF TOURNAMENT

Henry Tuck took the last ORNL Golf Tournament of the year, playing an even par at the Southwest Point Golf Course. He was followed by J. D. Hudson, with a 73.

Handicap honors were shared by Charles Coley and Don Dicke, shooting 76 each. Kurt Lannom and Mac Wright counted 14 pars, N. O. Case and Joe Deatherage, 13.

Bill Van Pelt scored an 80 in the second flight, and D. D. Montgomery and Wayne Paul scored 83. John Holt took an 82 for handicap honors, and Steven Rich counted an 85.

Ed Hensley counted eight pars; Eddie Cox, Howard Klaus, Chester Morgan, Sam Shell and Danny Simpson, seven.

Don Wolfenbarger put an 87 in the third flight; Ed Rawlings an 88. Handicap lows went to Bill Eldridge, 90; Leon Fair and J. C. Moore, each with 92.

Frank Zupan counted four pars.

HIGH POWERED RIFLE LEAGUE

The 1975 season for the All Carbide High Powered Rifle League has been completed. Scratch division winners were Jack Huff, Y-12; Don Kiplinger and Larry Weston, both of ORNL. In the handicap division it was Hugo Bertini and Joe Crowell, both of ORNL; and Bill Galyon, Y-12.

FAMILY BOWLING LEAGUE

The Oops team still stays atop the All Carbide Family Mixed League, which hits the hardwood on Friday nights. Elmer Johnson and Tillie Plaza led scratch scorers recently with scores of 521 and 493 respectively.

RECREATIONOTES

ORGDP BARBECUE — HOOTENANNY

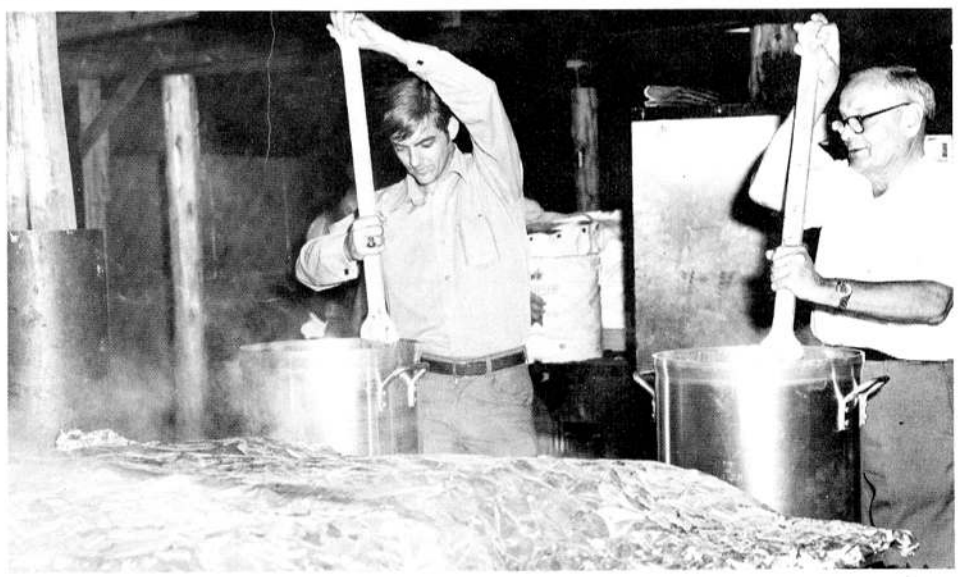
Saturday, September 27 is the big day for the annual Barbecue — Hootenanny for ORGDPers this year. The place again will be the Clark Center Recreation Park.

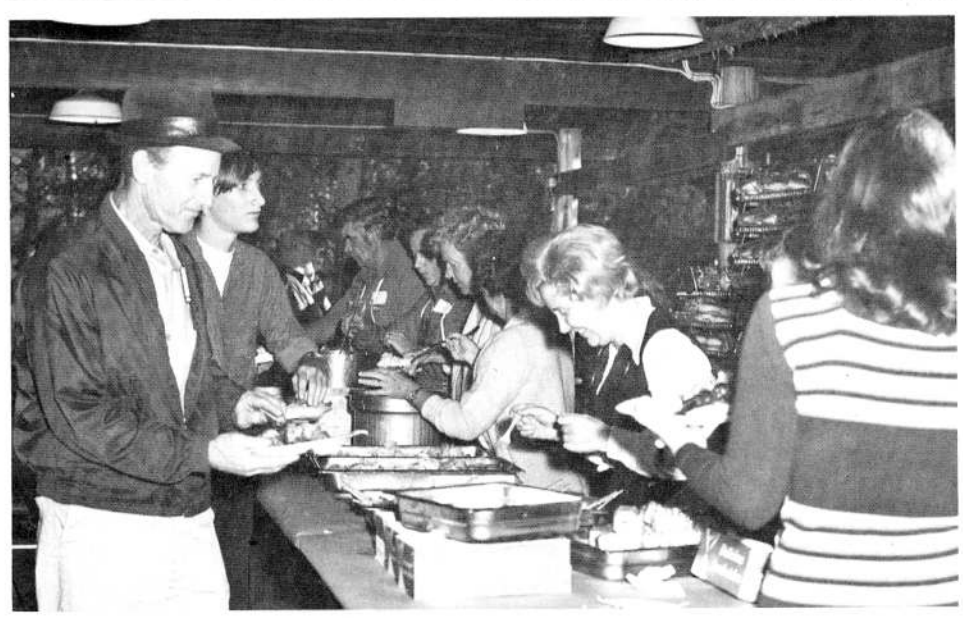
There will be a band for dancing, softball games, special games for the children, magic acts (Austinini) and clogging, as well as a popular sing-along.

Tickets, which are $2.50 for adults, $1 for children, are available through the divisions in the plant. Retirees and their families are especially invited and may obtain tickets through the Recreation Office at extention 3-5833. There will be tickets available at the gate on September 27, too.

The star of the big event will be the barbecue which has been simmering all night and prepared by shiftworkers for the occasion.

Make your plans now to be there.





BARBECUE-HOOTENANNY RETURNS — Oak Ridge Gaseous Diffusion employees again gather at the Clark Center Recreation Park for their annual Barbecue-Hootenanny. The big event is set for Saturday, September 27. Tickets are available throughout ORGDP, and retirees may obtain tickets from the Recreation Department, extension 3-5833.

T & A's: Yes? No? Maybe?

By T. A. Lincoln, M.D.

It has been estimated that about one million tonsillectomies and adenoidectomies (T&A's), either alone or in combination, are performed each year in the United States. Just these operations and all the hospital and physician care associated with them amount to a 375 - 500 million dollar health industry. Are they cost effective? Are the benefits worth the risks? Is there a solid scientific basis for performing them?

These questions have been bothering many physicians for a long time but funding agencies have not had much interest in supporting research. Finally, early in 1973, an Ad Hoc Committee on Tonsillectomy and Adenoidectomy was named by the American Council on Otolaryngology to define the "state of the art" and to try to arrive at a consensus on management. The chairman was Dr. Charles D. Bluestone, professor of otolaryngology of the University of Pittsburgh School of Medicine. A workshop of 27 experts was convened in June, 1974, and its report, prepared by the committee, was published in February of this year.

The committee concluded that there was inadequate information on why and how tonsils get infected or become enlarged. Too little is known about their role in fighting infection. The criteria and methods for either medical or surgical treatment are still poorly defined.

The committee reported important socioeconomic factors which influence the frequency of T & A's. Ten times as many children who were cared for by private physicians had T & A's when compared to those who went to public clinics. Although not stated by the committee, it was implied that private patients probably had been **over**-operated rather than public clinic patients **under**-operated.

T&A functions

The tonsils and adenoids, as well as numerous patches of lymphoid tissue, encircle the pharynx in what is called Waldeyer's ring. Many experts regard this ring as the first line of defense against respiratory infections. During breathing, bacteria and viruses constantly are impinged on the surface of these lymphoid structures. The tonsils capture many of these micro-organisms and are capable of synthesizing antibodies against them. There is recent evidence to suggest that the tonsils also act as immunologic messengers by making signal material which is transported to remotely located lymphoid tissue. There, additional antibodies are produced and released.

Does removing the tonsils reduce the vigor of a person's microbial defenses or local immunologic capability? The question is still unanswered, but studies have shown that children who have their tonsils produce appreciably more nasopharyngeal antibody, for example to poliovirus, than those who have had them removed.

Do sore throats stop?

A still unresolved question is whether children who have their tonsils removed have fewer sore throats. Most sore throats represent the first phase of a virus upper respiratory infection. The diagnosis of "Strep throat" or bacterial tonsillitis cannot be made by just looking at swollen, red tonsils covered with patches of yellowish exudate. Even throat cultures can often be wrong but they are the best diagnostic test currently available. Most cases of bacterial sore throat can be successfully treated with antibotics. There is not statistically significant data to support the idea that a T & A prevents recurrent sore throats.

The generally accepted indications for a T & A are enlargement sufficient to partially obstruct the airway and the eustachian tubes to the ears or interfere with eating. Obstruction can cause problems in nutrition, breathing, speech, dental occlusion or recurrent middle ear infections.

Only rarely will there be cases who have either genuine chronic tonsillitis or frequent recurrent acute tonsillitis who cannot be managed by antibiotic therapy. There is still much disagreement on who qualifies for surgery, but certainly a long period of close observation and meticulous medical management is advisable.

Significant risk

The risk of a T & A even done by a board certified specialist surgeon or anesthetist is significant, even though small. In a study done in 1970, there was one death for every 16,207 tonsillectomies, adenoidectomies or both. In a specific case if the need is marginal and the benefit uncertain, then even this small risk has to be considered carefully.

Most children's tonsils diminish in size as they go through puberty and the frequency of tonsillitis decreases. Conservative management and patience is often all that is necessary. Frequent medical visits and antibiotics are expensive but they have less risk and may be all that is necessary. Hopefully, money will be found to support badly needed research on the function and diseases of the tonsils and adenoids so future management of tonsillitis and tonsillar hypertrophy can be more rational.

RIDES-RIDES-RIDES

ORNL

RIDE from University of Tennessee area, Knoxville, to East or South Portal, 8:15 a.m. shift. P. S. Murty, plant phone 3-1842.

JOIN CARPOOL from Cedar Bluff area (Gulf Park) to East Portal, 8:00 - 4:30 shift or earlier. Joe Pace, plant phone 3-6022, home phone 690-0325.

CAR POOL MEMBERS from Waddell Circle, West Outer Drive or Pennsylvania Avenue areas, Oak Ridge, to East Portal, 8:15 a.m. shift. Tom Burnett, plant phone 3-6939, home phone 483-1975; or Dick Reed, plant phone 3-1801, home phone 483-3458.

Y-12 PLANT

RIDE or will JOIN CAR POOL from Greentree Apartments, Summit Circle, West Knoxville, to any portal, straight day. Mitchell Olszewski, plant phone 3-5306, home phone Knoxville 588-6633.

ORGDP announces four promotions

J. R. Eichin

M. H. Hickey Jr.

A. L. Johnson

R. A. Whitaker

Four new assignments have been listed at the Oak Ridge Gaseous Diffusion Plant.

John R. Eichin has been made a maintenance foreman in the Fabrication and Maintenance Division. A native of Farmingdale, N.Y., he joined Union Carbide last year after working with the Willey Optical Corporation, Grumman Aerospace and Bendix Launch Support. He is attending Roane State Community College, and lives at Route 7, Ladd Estates, Harriman. He and his wife, the former Judith Lynn, have one son.

Marshall H. Hickey Jr. has been named an associate design engineer in the Engineering Division. Born in Knoxville, he has been at ORGDP nine years, after attending The University of Tennessee. He worked with Dempster Brothers prior to that also. He and his wife, the former Virginia Helton, live at Route 20, Greenbrook Drive, Knoxville.

Arnold L. Johnson has been promoted to a maintenance foreman. Born in Hardin County, Tenn., he has been with Union Carbide 10 years. He and his wife, the former Carolyn Sue Nelson, live at Route 2, Andersonville, with their three children.

Roy A. Whitaker has also been made a maintenance foreman. He was born in Louisville, Ky., and worked in ORNL before transferring to ORGDP in 1966. Prior to joining Union Carbide he worked as manager of the City Market in Elm Grove. His wife is the former Janice McConkey, and they live at 111 Gordon Road, Oak Ridge, with their two sons.

COMPANY Service 20 25 30

ORNL

30 YEARS

Russell A. Schmidt, Engineering; Arthur M. Houser, Finance and Materials; Alan T. Gresky and Glenn C. Rogers, both Chemical Technology; Eldred B. Hansard, Inspection Engineering; James P. Sprain, Health Physics;

Simeon P. Legg, Operations; Edward J. Frederick, Chemical Technology; Richard E. Zedler, Instrumentation and Controls; William D. Kennemore, Operations; Ivan H. Wiggins, Health Physics; Claude McBee, Operations, and Joseph J. Kurtz, Engineering.

25 YEARS

John O. Blomeke, Robert E. Sizemore, Paul N. Haubenreich, Paul Rubel, Vernon F. Raaen, Ralph R. Coltman Jr., Leo B. Holland, Earnest G. Deaderick, James C. White, Elizabeth M. Kelly, William T. Bostic, Betty G. Underwood, Donald K. Poland and William L. Griffith.

20 YEARS

Homer E. Henley, Mildred G. Lee, Thomas B. Jernigan, Martha C. Bentley, Joe W. Cable, Stella W. Perdue, John W. Krewson Jr., Robert H. Brown, Charles E. Childress, John H. Shubert, Robert P. Wichner and Roy C. Robertson.

GENERAL STAFF

30 YEARS

James C. Moore, General Accounting Division.

20 YEARS

Doris L. Sharp and Robert B. Bible Jr.

PADUCAH

20 YEARS

Arvid W. Gorline and Earl C. Simmons.

Technical editing appointments go to Tobias and Wasson

Two Oak Ridge National Laboratory staff members have been appointed to editorial positions for technical publications.

Melvin L. Tobias, a research staff member in the Reactor Division, has been appointed associate editor of *Nuclear Science and Engineering*, a publication of the American Nuclear Society. Tobias is a charter member of the Society and has served the journal as an author, manuscript receiver and book reviewer.

Tobias received the Ph.D. degree in chemical engineering from the University of Minnesota. He joins the staff of Dixon Callihan, a retired ORNL staff member, who has been editor of the publication for many years.

John S. Wassom of the Toxicology Information Center, ORNL Information Division, has been named to the editorial board of *Mutation Research*. The publication is an international journal on mutagenesis, published quarterly in Amsterdam.

Associate editors of *Mutation Research* are F. J. deSerres and Alexander Hollaender, both former ORNL staff members.

Y-12 ROBOT — The Y-12 mobile manipulator, left, and its auxiliary equipment includes a remote control arm assembly, a transformer pack and control console. The equipment is transported by the trailer at rear which also is equipped with a workroom-laboratory.

14/1639

Y-12 robot

(Continued from page 1)

Robert H. Wilson, chief of environmental health and safety at the University praised the Y-12 men for their successful recovery operation. He said the manipulator was only one of two such machines in the country available outside laboratories and the only one able to do the UR job.

The recovery operation received very prominent coverage in the Rochester newspapers and television news programs.

COMPANY Service

20 25 30

ORGDP
30 YEARS

Harold A. Kermicle, instrumentation and quality assurance; Karlthalee P. Turman, administrative services; James C. Farmer, guard department; Oscar Wright, janitors department; Wester D. Chapman, U-235 separation department; Aubrey Langdon, isotope analysis department; Orland C. Smitherman, metallurgy department; James W. Fox, fire department; Carl L. Hatmaker, chemical operations administration; John T. Dickenson, maintenance heavy equipment department; John J. Hotz, utilities operations administration; Max Wyatt, SS material handling; and Henry L. Floyd, U-235 separation department.

20 YEARS

Elwood H. Gift and Donald W. McGee.

BLOODMOBILE

In making its rounds in Tennessee and Kentucky, the Red Cross Bloodmobile travels an estimated 34 thousand miles each year — enough distance to circle the earth at the equator with 10,000 miles to spare.

Savings Plan-Personal Investment Account

Recent unit values:

	Fixed Income Fund	UCC Stock	Equity Investment Fund
August 73	10.0000	34.7688	10.0000
December 73	10.2444	31.8170	9.3602
December 74	11.0438	40.3009	6.4354
April 75	11.3492	58.5170	8.0395
May 75	11.4275	63.8335	8.4588
June 75	11.5025	59.5729	8.7039
July 75	11.5846	61.4372	8.0111

Note: Fixed Income Fund unit values reflect interest additions to achieve the guaranteed effective annual interest rate of 8.55% for 1975. Union Carbide stock values are the average cost of stock purchases during the month plus brokerage charges. Equity Investment Fund unit values represent the month-end market value of securities held by the Fund. Dividing the total value by the number of units in the fund establishes the month's unit value — and the price at which new units are added that month.

QUESTION BOX

(Continued from page 3)

paying for publication of the material with each location paying for the cost of distribution. In the Nuclear Division these distribution costs are reimbursed by ERDA.

QUESTION: Why don't weekly employees receive shift differential when on sick pay? Hourly employees receive shift differential when off due to illness, and monthly employees receive it for part of the time.

ANSWER: Neither hourly nor weekly employees receive shift differential pay during absences due to illness. Under certain conditions monthly employees are paid this shift premium. Shift differential for hourly and weekly employees is determined on an hourly basis while shift differential for monthly employees is on a monthly rate; therefore, short periods of absence for monthly personnel are not adjusted while long-term absences are.

QUESTION: If Union Carbide Corporation can afford to waste approximately $60,000 by throwing a fancy formal dinner at the State Governors' Conference held in New Orleans, why can't we get the air conditioning working at the ORNL cafeteria? Aren't the ORNL employees more important to Carbide than the nonproductive state governors?

ANSWER: Your question implies you are not aware of the differences between ERDA funding for ORNL and other Union Carbide Corporation funding activities.

The reception that UCC recently sponsored at the Governors' Conference in New Orleans cost less than $10,000, not the $60,000 you indicate. It was paid for with UCC private funds and offered the opportunity for some of our representatives to become better acquainted with governors attending the conference.

The cafeteria contains three separate air conditioning systems. In June the unit serving the main dining room was out of service for a four-day period awaiting replacement parts from the manufacturer. The cafeteria is checked daily by maintenance personnel for operation of heating and air conditioning and temperature control to assure the best level of comfort under the guidelines for energy conservation. Costs of operating the ORNL cafeteria, including its air conditioning system, are reimbursed by ERDA. We are sorry about the inconvenience experienced by employees during the period the system was out of service.

QUESTION: How beneficial is it to the Laboratory for a senior research person to be absent from the Laboratory six months out of the year delivering papers anywhere and everywhere he can get them accepted? This person has done no appreciable research in years. When he is at the Laboratory, he spends the majority of his time writing the same old abstract/paper over and over again, hoping to drum up travel funds for yet another trip.

ANSWER: Without specific facts, it is not possible to answer your question. We would suggest you discuss the matter, if it concerns you, directly with the individual involved or with his supervision.

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NUCLEAR DIVISION
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